```
=> File .Biotech
=> s (neurotrophin or NT or NT-4/5 or NT-3 or nerve growth factor or NGF)

L1      135148 (NEUROTROPHIN OR NT OR NT-4/5 OR NT-3 OR NERVE GROWTH FACTOR OR
               NGF)

=> s l2 and (misfold variant or glycosylated variant or proteolytic variant or
chemical variant)
L3          14 L2 AND (MISFOLD VARIANT OR GLYCOSYLATED VARIANT OR PROTEOLYTIC
               VARIANT OR CHEMICAL VARIANT)

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4          10 DUP REM L3 (4 DUPLICATES REMOVED)

=> d l4 1-10 bib ab

L4   ANSWER 1 OF 10  USPATFULL
AN     2002:265899  USPATFULL
TI     Novel semaphorin genes (I)
IN     Inagaki, Shinobu, Ibaraki-shi, JAPAN
       Furuyama, Tatsuo, Ibaraka-shi, JAPAN
PA     Sumitomo Pharmaceuticals Company, Limited (non-U.S. corporation)
PI     US 2002146775      A1   20021010
AI     US 2002-144031     A1   20020514 (10)
RLI    Division of Ser. No. US 1999-308179, filed on 14 May 1999, PENDING A 371
       of International Ser. No. WO 1997-JP4111, filed on 12 Nov 1997, UNKNOWN
PRAI   JP 1996-321068      19961115
DT     Utility
FS     APPLICATION
LREP   BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747
CLMN   Number of Claims: 5
ECL    Exemplary Claim: 1
DRWN   2 Drawing Page(s)
LN.CNT 1218
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The present invention provides a novel Semaphorin having
       neurite-outgrowth inhibition activity or proteins analogous thereto,
       peptide fragments of, or antibodies against, such proteins, genes
       encoding such proteins, expression vectors for said genes, transformed
       cells into which said expression vectors have been introduced, methods
       for producing a recombinant protein which employ said transformed cells,
       antisense nucleotides against the above genes, transgenic animals
       involving insertion or deletion of the above genes, and screening
       methods for antagonists of the above proteins, all of which are useful
       mainly in diagnoses, treatments, or studies relating to neurological
       diseases. The present invention further provides use of such proteins,
       peptides, antibodies, genes, or antisense nucleotides as pharmaceutical
       or diagnostic agents or laboratory reagents.

L4   ANSWER 2 OF 10  USPATFULL
AN     2002:251935  USPATFULL
TI     Purification of NGF
IN     Burton, Louis E., San Mateo, CA, UNITED STATES
       Schmelzer, Charles H., Burlingame, CA, UNITED STATES
       Beck, Joanne T., Westlake Village, CA, UNITED STATES
PI     US 2002137893      A1   20020926
AI     US 2002-72681      A1   20020208 (10)
RLI    Continuation of Ser. No. US 2000-675503, filed on 29 Sep 2000, GRANTED,
       Pat. No. US 6423831 Continuation of Ser. No. US 1999-363573, filed on 29
       Jul 1999, GRANTED, Pat. No. US 6184360 Continuation of Ser. No. US
       1997-970865, filed on 14 Nov 1997, GRANTED, Pat. No. US 6005081
PRAI   US 1996-30838P      19961115 (60)
       US 1997-47855P      19970529 (60)
DT     Utility
```

FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 620 NEWPORT CENTER DRIVE, SIXTEENTH FLOOR, NEWPORT BEACH, CA, 92660
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 2052
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods are provided for large scale purification of neurotrophins, including mature **NGF**, suitable for clinical use. The methods provide means to separate neurotrophins from various less desirable misprocessed, misfolded, size, glycosylated, or charge forms. Compositions of neurotrophins, including mature **NGF**, substantially free of these **variants** are also provided.

L4 ANSWER 3 OF 10 USPATFULL
AN 2002:8481 USPATFULL
TI CONTROLLED RELEASE MICROENCAPSULATED **NGF** FORMULATION
IN CLELAND, JEFFREY L., SAN CARLOS, CA, UNITED STATES
LAM, XANTHE M., SAN FRANCISCO, CA, UNITED STATES
DUENAS, EILEEN T., SAN JOSE, CA, UNITED STATES
PI US 2002004481 A1 20020110
AI US 1998-95911 A1 19980611 (9)
PRAI US 1997-49541P 19970613 (60)
DT Utility
FS APPLICATION
LREP GINGER R. DREGER, KNOBBE MARTENS OLSON & BEAR LLP, 620 NEWPORT CENTER DRIVE, SIXTEENTH FLOOR, NEWPORT BEACH, CA, 92660
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 1938
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **NGF** microencapsulation compositions having controlled release characteristics, preferably with increased stability, for the **NGF** component, particularly human recombinant **NGF** ("rhNGF") are provided that yield enhanced stability of **NGF** for use in promoting nerve cell growth, repair, survival, differentiation, maturation or function. Methods for making and using such compositions are also provided.

L4 ANSWER 4 OF 10 USPATFULL
AN 2002:209328 USPATFULL
TI Semaphorin genes (I)
IN Inagaki, Shinobu, Ibaraki, JAPAN
Furuyama, Tatsuo, Ibaraki, JAPAN
PA Sumitomo Pharmaceuticals Company, Limited, Osaka, JAPAN (non-U.S. corporation)
PI US 6436669 B1 20020820
WO 9822504 19980528
AI US 1999-308179 19990514 (9)
WO 1997-JP4111 19971112
19990514 PCT 371 date
PRAI JP 1996-321068 19961115
DT Utility
FS GRANTED
EXNAM Primary Examiner: Clark, Deborah J. R.; Assistant Examiner: Chen, Shin-Lin
LREP Birch, Stewart, Kolasch & Birch, LLP
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1272
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a novel Semaphorin having

neurite-outgrowth inhibition activity or proteins analogous thereto, peptide fragments of, or antibodies against, such proteins, genes encoding such proteins, expression vectors for said genes, transformed cells into which said expression vectors have been introduced, methods for producing a recombinant protein which employ said transformed cells, antisense nucleotides against the above genes, transgenic animals involving insertion or deletion of the above genes, and screening methods for antagonists of the above proteins, all of which are useful mainly in diagnoses, treatments, or studies relating to neurological diseases. The present invention further provides use of such proteins, peptides, antibodies, genes, or antisense nucleotides as pharmaceutical or diagnostic agents or laboratory reagents.

L4 ANSWER 5 OF 10 USPATFULL
AN 2002:181791 USPATFULL
TI Isolation of neurotrophins from a mixture containing other proteins and **neurotrophin variants** using hydrophobic interaction chromatography
IN Burton, Louis E., San Mateo, CA, United States
Schmelzer, Charles H., Burlingame, CA, United States
Beck, Joanne T., Westlake Village, CA, United States
PA Genentech, Inc., So. San Francisco, CA, United States (U.S. corporation)
PI US 6423831 B1 20020723
AI US 2000-675503 20000929 (9)
RLI Continuation of Ser. No. US 1999-363573, filed on 29 Jul 1999, now patented, Pat. No. US 6184360 Continuation of Ser. No. US 1997-970865, filed on 14 Nov 1997, now patented, Pat. No. US 6005081
PRAI US 1997-47855P 19970529 (60)
US 1996-30838P 19961115 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Low, Christopher S. F.; Assistant Examiner: Mohamed, Abdel A.
LREP Knobbe, Martens, Olson & Bear, LLP
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2348
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods are provided for large scale purification of neurotrophins, including mature **NGF**, suitable for clinical use. The methods provide means to separate neurotrophins from various less desirable misprocessed, misfolded, size, glycosylated, or charge forms. Compositions of neurotrophins, including mature **NGF**, substantially free of these **variants** are also provided.

L4 ANSWER 6 OF 10 USPATFULL
AN 2001:18606 USPATFULL
TI Purification of **NGF**
IN Burton, Louis E., San Mateo, CA, United States
Schmelzer, Charles H., Burlingame, CA, United States
Beck, Joanne T., Westlake Village, CA, United States
PA Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)
PI US 6184360 B1 20010206
AI US 1999-363573 19990729 (9)
RLI Continuation of Ser. No. US 1997-970865, filed on 14 Nov 1997, now patented, Pat. No. US 6005081
PRAI US 1996-30838P 19961115 (60)
US 1997-47855P 19970529 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Low, Christopher S. F.; Assistant Examiner: Mohamed, Abdel A.
LREP Knobbe, Martens, Olson & Bear, LLP

CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2226
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods are provided for large scale purification of neurotrophins, including mature **NGF**, suitable for clinical use. The methods provide means to separate neurotrophins from various less desirable misprocessed, misfolded, size, glycosylated, or charge forms. Compositions of neurotrophins, including mature **NGF**, substantially free of these **variants** are also provided.

L4 ANSWER 7 OF 10 USPATFULL
AN 2000:117328 USPATFULL
TI Controlled release microencapsulated **NGF** formulation
IN Cleland, Jeffrey L., San Carlos, CA, United States
Lam, Xanthe M., San Francisco, CA, United States
Duenas, Eileen T., San Jose, CA, United States
PA Genentech, Inc., So. San Francisco, CA, United States (U.S. corporation)
PI US 6113947 20000905
AI US 1997-874647 19970613 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Page, Thurman K.; Assistant Examiner: Channavajjala, Lakshmi
LREP Knobbe, Martens, Olson & Bear, LLP
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **NGF** microencapsulation compositions having controlled release characteristics, preferably with increased stability, for the **NGF** component, particularly human recombinant **NGF** ("rhNGF") are provided that yield enhanced stability of **NGF** for use in promoting nerve cell growth, repair, survival, differentiation, maturation or function. Methods for making and using such compositions are also provided.

L4 ANSWER 8 OF 10 USPATFULL
AN 1999:167121 USPATFULL
TI Purification of recombinant human neurotrophins
IN Burton, Louis E., San Mateo, CA, United States
Schmelzer, Charles H., Burlingame, CA, United States
Beck, Joanne T., Westlake Village, CA, United States
PA Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)
PI US 6005081 19991221
AI US 1997-970865 19971114 (8)
PRAI US 1996-30838P 19961115 (60)
US 1997-47855P 19970529 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Mohamed, Abdel A.
LREP Torchia, Timothy E.
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2397
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods are provided for large scale purification of neurotrophins, including mature **NGF**, suitable for clinical use. The methods provide means to separate neurotrophins from various less desirable misprocessed, misfolded, size, glycosylated, or charge forms.

Compositions of neurotrophins, including mature **NGF**, substantially free of these **variants** are also provided.

L4 ANSWER 9 OF 10 BIOTECHDS COPYRIGHT 2002 THOMSON DERWENT AND ISI
AN 1998-08022 BIOTECHDS
TI Isolation of neurotrophins from e.g. misfolded or glycosylated **variants**;
neurotrophin e.g. **nerve growth factor**, **neurotrophin**-3, **neurotrophin**-4/5
purification from bacterium fermentation broth or mammal cell culture
AU Burton L E; Schmelzer C H; Beck J T
PA Genentech
LO South San Francisco, CA, USA.
PI WO 9821234 22 May 1998
AI WO 1997-US21068 14 Nov 1997
PRAI US 1997-47855 29 May 1997; US 1996-30838 15 Nov 1996
DT Patent
LA English
OS WPI: 1998-322333 [28]
AB A new method for isolation of **neurotrophin** (**NT**) from a mixture which also contains other proteins involves separating the **NT** using a hydrophobic interaction chromatography resin (HICR). The mixture preferably contains a misfolded **NT variant**, an incorrectly proteolytically processed **variant**, or a glycoprotein **variant** of **NT**. Also claimed are: methods for separation of **NT** from a **chemical variant** of **NT** using high performance cation-exchange chromatography; isolation of **NT** from a mixture of proteins using a silica gel resin; and a composition containing a carrier and a pure **NT**. The **NT** may be prepared from bacterium culture and refolded in vitro prior to using HICR, or may be isolated from mammal cell culture. The methods are especially useful for purification of NTs in the **nerve growth factor** (**NGF**) superfamily, e.g. **NGF**, **neurotrophin**-4/5 or **neurotrophin**-3, for clinical use. In an example, recombinant CHO cells were transfected with a vector containing a human **NGF**-encoding DNA sequence. The cells were cultured and the culture medium was harvested and **NGF** was purified. (49pp)

L4 ANSWER 10 OF 10 MEDLINE DUPLICATE 2
AN 1999018030 MEDLINE
DN 99018030 PubMed ID: 9799803
TI Bovine aortic endothelial cells express a **variant** of the very low density lipoprotein receptor that lacks the O-linked sugar domain.
AU Magrane J; Reina M; Pagan R; Luna A; Casaroli-Marano R P; Angelin B; Gafvels M; Vilaro S
CS Department of Cellular Biology, Faculty of Biology, University of Barcelona, Avda. Diagonal, 645, E-08028 Barcelona, Spain.
SO JOURNAL OF LIPID RESEARCH, (1998 Nov) 39 (11) 2172-81.
Journal code: 0376606. ISSN: 0022-2275.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-AF016537; GENBANK-AF034420
EM 199812
ED Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981222
AB The very low density lipoprotein (VLDL) receptor is a member of the low density lipoprotein supergene family of receptors in which differential splicing of mRNA has been reported. We present several lines of evidence showing that bovine aortic endothelial cells exclusively express a VLDL receptor isoform that lacks the O-linked sugar domain i) Western and

receptor-associated protein (RAP) ligand blotting gave a single band of about 99 kDa in membrane extracts of bovine aortic endothelial cells (BAEC). ii) Screening of the BAEC cDNA library with the previously characterized human VLDL receptor cDNA as a probe gave several C-terminal-positive clones; all lacked the 84 nucleotides corresponding to exon 16. Polymerase chain reaction (PCR) confirmed that VLDL receptor cDNA encoding exon 16 was absent from the library. iii) Reverse transcription (RT)-PCR analysis of the BAEC mRNA using a pair of oligonucleotide primers that flank the deletion gave only one band of 136 **nt**. iv) Semiquantitative RT-PCR analysis showed that only the non-O-**glycosylated variant** was expressed in BAEC. Cell-binding studies with antibodies against the N-terminal domain showed that the BAEC VLDL receptor is present at the plasma membrane, suggesting that the non-**glycosylated variant** could be functional. In addition, RT-PCR performed in bovine tissues showed that the **variant** containing the O-linked sugar domain is preferentially expressed in heart, brain, and skeletal muscle, whereas the non-O-glycosylated spliced **variant** is found in all tissues analyzed. Taken together these results suggest that the differential splicing of the VLDL receptor is cell- and tissue-specific and that the functions of the receptor could depend on the cell type.

=>

---Logging off of STN---

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Executing the logoff script...

=> LOG Y

STN INTERNATIONAL LOGOFF AT 11:51:59 ON 26 NOV 2002